

## ATMOSPHERIC ELECTRICITY.

*Thunder-storms.*—Thunder-storms are reported as having occurred mostly in the Southern States and during the passage of general storms, viz., on the 7th, in Georgia and Florida; on the 21st, in Georgia, North Carolina, Tennessee, Mississippi and Texas; on the 22d, in Georgia, Alabama, Mississippi and Louisiana; on the 23d, in Alabama, Mississippi, Louisiana and Texas; on the 24th, in Alabama, Louisiana and North Carolina; on the 27th, in Louisiana, Indian Territory, Tennessee and Texas; on the 28th, in Georgia, Florida, Alabama, Mississippi, Louisiana, Indian Territory and Texas; on the 29th, in Georgia and Alabama.

The following extract is made from the observer's report at Santa Fe, New Mexico: "January 15th, extraordinary electrical storm on (Telegraph) line, noticed first at 12 M., and lasted till 3 P. M. The current was so strong the line could not be worked. The key was left open, and most of the time was surrounded by a ring of fire." It was during the passage of low barometer, No VIII, that this happened.

*Auroras.*—Comparatively few displays have been reported, and those generally faint. They were observed on the 5th, at Alpena, Michigan, and La Crosse, Wisconsin; on the 7th, at Duluth, Minnesota; on the 9th, at Shreveport, Louisiana; on the 11th, 25th and 29th, at Escanaba, Michigan; on the 31st, at Alpena and Salt Lake City.

## OPTICAL PHENOMENA.

*Solar Halos.*—Those reported most frequently were observed as follows: On the 4th, in Minnesota, Iowa, Nebraska and Illinois; on the 5th, in New York, Louisiana, Alabama, Missouri and Nebraska; on the 6th, in Minnesota, New York, Vermont, New Hampshire and Maine; on the 8th, in Colorado, Minnesota, Wisconsin, Michigan, New York, New Hampshire, Pennsylvania, Virginia and Mississippi; on the 9th, in Minnesota, Iowa, Wisconsin and Ohio; on the 10th, in Minnesota, Ohio, Pennsylvania, New York, New Hampshire, Vermont, Maine and Alabama; on the 11th, in Illinois, Pennsylvania and New York; on the 12th, in Colorado, Nebraska, Michigan, Ohio and New Hampshire; on the 18th, in Maine, Massachusetts, New Hampshire, New York and Wisconsin; on the 19th, in Minnesota, Ohio, New York and New Hampshire; on the 24th, in Minnesota, Nebraska, Massachusetts and Maine; on the 25th, in Georgia, Missouri, Illinois and Nebraska; on the 30th, in Alabama, Ohio, Michigan and Nebraska.

*Lunar Halos.*—That of the 14th was seen principally in Georgia, South Carolina and North Carolina. Those of the 15th, 16th, 17th, 18th, 19th, 20th, 21st and 23d, were observed at many stations in the Northern States.

*Mirage.*—Observed at Ellenwood, Kansas, on the 5th, 6th and 7th; at Standish, Maine, on the 12th.

*Parhelia.*—Reported as seen at many stations, and principally in northern sections. The most brilliant occurred on the 4th, 5th, 8th, 12th, 13th, 15th, 18th and 30th, and the majority in the Western States and Territories.